

(19) World Intellectual Property
Organization
International Bureau



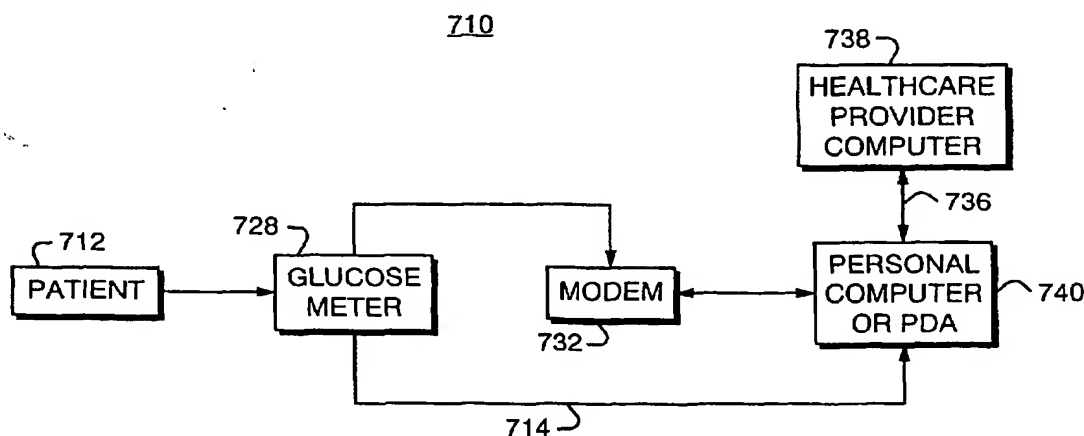
(43) International Publication Date
19 February 2004 (19.02.2004)

PCT

(10) International Publication Number
WO 2004/015539 A2

- (51) International Patent Classification⁷: **G06F**
- (21) International Application Number:
PCT/US2003/025053
- (22) International Filing Date: 8 August 2003 (08.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/402,976 13 August 2002 (13.08.2002) US
60/478,377 13 June 2003 (13.06.2003) US
- (71) Applicant (for all designated States except US): **UNIVERSITY OF VIRGINIA PATENT FOUNDATION** [US/US]; 1224 West Main Street, Suite 1-110, Charlottesville, VA 22903 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **KOVATCHEV, Boris, P.** [US/US]; 121 Ridge Drive, Amherst, VA 24521 (US). **COX, Daniel, J.** [US/US]; 1606 Keith Valley Road, Charlottesville, VA 22901 (US).
- (74) Agent: **DECKER, Robert, J.**; University of Virginia Patent Foundation, 1224 West Main Street, Suite 1-110, Charlottesville, VA 22903 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD, SYSTEM, AND COMPUTER PROGRAM PRODUCT FOR THE PROCESSING OF SELF-MONITORING BLOOD GLUCOSE(SMBG)DATA TO ENHANCE DIABETIC SELF-MANAGEMENT



(57) Abstract: A method, system, and computer program product related to the maintenance of optimal control of diabetes, and is directed to predicting the long-term exposure to hyperglycemia, and the long-term and short-term risks of severe or moderate hypoglycemia in diabetics, based on blood glucose readings collected by a self-monitoring blood glucose device. The method, system, and computer program product pertain directly to the enhancement of existing home blood glucose monitoring devices, by introducing an intelligent data interpretation component capable of predicting both HbA_{1c} and periods of increased risk of hypoglycemia, and to the enhancement of emerging continuous monitoring devices by the same features. With these predictions the diabetic can take steps to prevent the adverse consequences associated with hyperglycemia and hypoglycemia.